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THE GARDENER'S RECEIPT BOOK

THE

GARDENER'S RECEIPT BOOK:

A TREASURY OF INTERESTING FACTS

AND

Practical Information

USEFUL IN HORTICULTURE.

COMPRISING

THE MOST EFFECTUAL METHODS FOR THE DESTRUCTION OR
REMOVAL OF EVERYTHING INJURIOUS TO THE GARDEN;
WITH PREVENTIVES AND CURES FOR THE VARIOUS
DISEASES OF PLANTS, AND PERFECT DIRECTIONS
FOR THE PRESERVATION OF TREES, FRUITS,
AND FLOWERS.

BY WILLIAM JONES.

FIFTH EDITION,
MUCH ENLARGED.

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GROOMBRIDGE AND SONS,
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"Particles of science are often widely scattered; he that collects these is very *laudably employed*, as he facilitates the progress of others, and may give to some adventurous mind leisure for new thoughts and original designs."—DR. JOHNSON.

BIBLIOTHECA · BODLEIANA ·

PREFACE.

In offering this little work to public attention, some explanation may be requisite. I have long seen the necessity of a work of this description, owing to the inconvenience and almost impossibility of obtaining such information without searching almost every author on gardening, saying nothing of the expense of procuring such works; therefore, I have selected, for the convenience of all persons connected with gardening, the cheapest, most effectual, and easily-applied recipes for the destruction of vermin and insects; the preservation of fruits, vegetables, and flowers; likewise preventives and cures for those diseases to which the vegetable race is subject. No such work existing, however, prior to this publication, I trust its value will be at once apparent, as an acquisition to every gardener and amateur, as well as to every individual who has a garden to admire.

I have strictly avoided inserting anything without having proved its efficacy myself, or having heard from some of my correspondents that it has given satisfaction to them.

With respect to destroying insects, some people may expect some recipe to entirely extirpate them at one dressing; but to me this appears almost impossible, in many cases, without having recourse to something injurious to vegetation, and thereby rendering the remedy worse than the disease: therefore I would wish to impress on the mind of the reader, the absolute necessity *of persevering* in the use of any receipt he may select, feeling assured that such are efficient, if properly and perseveringly applied. I therefore trust no one will attribute their failing to the inefficacy of the receipt, if they have not perseveringly applied it.

The appearance of this work before the public may be the means of drawing from some gardener or amateur, something in advance to what is herein recorded; but my object has not been so much to teach men things of which they are ignorant, as to collect for them this eagerly-sought-for information into one volume, and thereby show them what they have got to improve upon.

My having had so many inquiries after such information, has induced me to lay before the public this little volume, in a form which, I trust, will prove acceptable, as *convenience* and *usefulness* have been my aim: how far I have succeeded is a question for the public to decide.

This new edition contains about fifty new receipts, mostly original; those selected from other works are duly acknowledged. The whole of the receipts retained from the former edition have been carefully revised, and there is not one instruction but may be relied on as having been proved effectual for the purpose for which it is recommended. Communications of new recipes, or improvements on any contained in this volume, if addressed—"Editor 'Gardener's Receipt Book,' 5, Paternoster Row, London, E.C.," will be most thankfully received, for incorporation in future *editions.*

THE

GARDENER'S RECEIPT BOOK.

American Blight.

Take half a peck of quicklime, half a pound of flowers of sulphur, and a quarter of a pound of lampblack. Mix with boiling water, enough to form a thick paint. With this, in the winter, when the leaves are off, paint the branches, having first removed all loose bark. In doing this, be sure to remove the soil from the bottom of the stem to the main roots, and paint all the underground part. February is a good time for this. If one application is not sufficient, repeat. Use the paint warm. When this has become dry, the trees should be looked over, and all cracks and holes stopped with well worked clay, and after frost the clay-stoppings should be dressed again, to close any cracks that may occur. Spirits of tar, ammoniacal liquorfrom the gas-works, strong tobacco-water, soap-suds, or urine, two months old, may be used with decided benefit. Train oil, and other fish oils have been used with success; but in applying the latter, care should be taken not to touch the buds.

Ants—To destroy.

Lime-water poured freely into the nests and burrows will cause them to flit, if it does not kill them. The most effectual remedy is to mix arsenic into a solution of sugar and water, which they will devour greedily, but care must be taken that no other animal gets to it. Cover the saucer with a slate, and a stone on the top of it, having a couple of pegs between the saucer and slate, to let the ants in freely. Boiling water poured on the nests, is another remedy; if the nest be in a pot amongst the roots of a plant, the best way is to immerse the pot and plant in water for five or six hours, in which time the ants will be drowned, and their eggs destroyed.

Another effectual plan is, to pour over the nest, at night, a strong decoction of elder leaves. To trap them, smear the inside of a garden pot with honey, invert it over the nest, and, when crowded with them, hold it over the steam of boiling water; or turn a flower-pot, with its hole stopped up, over the nest. The ants build up into it, and the whole colony may be taken away in a shovel.

They may be kept from ascending standards and espalier trees, by tying a piece of wool round the stems and the supporters.

Ants on Fruit Trees.

Make a line of gas-tar round the stem of the tree, or if it be trained on a wall, make a horizontal line near the ground, on the wall, and one round the stem; this will prevent ants from ascending.

Blight on Fruit Trees, etc.

When winter dressings have failed, and the pests appear in spring to such an extent as to endanger the crop, procure a quantity of ammoniacal liquor from the gas-works, and to every pailful of the liquor add six of water, and boil as soon as possible in a large copper. Apply this in the evening, hot, with a syringe, drenching every part of the trees, and letting not a leaf escape. It should be used as hot as can be borne by placing the hand in it, and thrown with as much force as possible into all the crevices in the bark, on the under sides of the leaves, and splashed vigorously against the wall on which espaliers are trained.

It may be used also for roses and bush fruits, with the most certain benefit. Two days after give another syringing with plain warm water. To clean the copper in which the mixture is prepared, fill it with water, throw in a shovel of cinder-ashes, and a pound of soda, and let it boil for half an hour.—*Cottage Gardener, No.* 409.

Scale—To remove from Fruit Trees.

Take sweet oil 1 quart, spirits of ammonia 1 quart, and one-third of a pint of spirits of turpentine; wash the trees by means of a brush in the winter time, but not to touch the buds. Train oil or any fish oil, applied in the same manner, has, in many instances, proved equally satisfactory in destroying the scale.

Woodlice—To clear a Conservatory of.

If two or three tomtits are shut up in a conservatory for a few days, they will devour all the woodlice, without doing any injury to the plants. If a toad or two are kept constantly in the house they will devour a great number.

A cheap Asphalte for Walks.

The place intended to be asphalted must be previously levelled, then put on it a coat of tar, and sift some road-sand or coal-ashes all over it very thickly; after this is dry repeat the operation until you have got four coats of tar, and as many of coal-ashes or road-sand. You will then have an excellent, clean, dry, hard path. It will make excellent *walks*, or floors for sheds, out-buildings, etc., and will wear for many years.

Another Asphalte.

Take eighteen parts of mineral pitch, and eighteen parts of resin, and put them into an iron pot, and place it over a fire, keeping them boiling a short time; then add to it sixty parts of coarse sand, mix it well together, and lay it on the path to the thickness of an inch; then sift a little fine gravel over it, and beat it in before the asphalte sets. This is a more durable asphalte than the former, though it is much more expensive and more troublesome to form. Another good asphalte may be made with one part mineral pitch, one part resin, seven parts chalk, and two parts coarse sand. Boil them together, and lay it on in a hot state, adding a little sifted gravel, as in the former.

Another Asphalte.

Take two parts of very dry lime rubbish, and one part coal-ashes, also very dry, and both sifted fine. In a dry place, on a dry day, mix them, and leave a hole in the middle of the heap, as bricklayers do when making mortar. Into this pour boiling hot coal-tar; mix, and when as stiff as mortar, put it three inches thick where the walk is to be; the ground should be dry, and beaten smooth. Sprinkle over it coarse sand. When cold, pass a light roller over it; in a few days the walk will be solid and waterproof.

Concrete Floors and Walks.

"Compost for barn and kitchen floors:—After the ground on which the floor is intended to be made is levelled, let it be covered to the thickness of three or four inches with stones, broken small, and the same well rammed; upon which let there be run, about one and a half inch above the stones, one part, by measures, of calcined ferruginous marl, and two of coarse sand and fine gravel, mixed to a thin gauge with water. Before this coating has become thoroughly set, lay upon it a coat of calcined marl, mixed with an equal part of fine sand, one to one and a half inch thick, floated to an equal surface. The addition of blood will render this compost harder. The calcined marl mentioned above is the Portland cement of commerce.

"Concrete for weak foundations, and for the bottoms of cattle-boxes and dung-pits, when not sufficiently stiff and sound to be impervious to water:—

"Newly-burned lime ground to a fine powder	2 measures
"Calcined septaria (ferruginous marl)	1 measure
"Gravel, broken stone, or brick, or lime riddlings . . .	6 measures

"Mix the above with water to a liquid gauge, and let it be thrown into its position from a height of ten or twelve feet, and when partially set let it be well beaten or rammed, to render it solid.

"Another concrete for the last two foregoing purposes, and also for garden walks:—Equal parts of gravel, well screened, and clean river or pit sand. With five parts of the mixture of gravel and sand, mix one part of Portland cement. Mix with water, and apply two inches thick."—*Ewart's "Agriculturist's Assistant."*

Crickets—To poison.

Take one pint of oatmeal and two ounces of arsenic, together with a little ground aniseed and caraway-seed mixed with it. This should be laid on pieces of paper, in convenient places for the crickets to partake of it. Also arsenic and honey may be mixed together, and laid about for them in the same way; but they will most readily partake of the former.

Bees—To feed.

Two pounds of loaf sugar, with half a pint of liquid, consisting of one quarter best vinegar, and three quarters water, the whole boiled together until it assumes a yellow colour; then poured into a well-greased dish, and cut up before cold into strips convenient for insertion into the hives. Should it candy on cooling, it is a proof that it has not been boiled enough, and should be returned to the saucepan without water, and boiled again.

Gardener's Boots—To waterproof.

A pint of boiled linseed oil, half a pound of mutton suet, six ounces of clean bees'-wax, and four ounces of resin, are to be melted and well mixed over a fire. Of this, while warm, but not hot enough to shrink the leather, with a brush lay on plentifully over new boots and shoes, when quite dry and clean. The leather remains pliant. The New England fishermen preserve their boots water-tight by this method, which, it is said, has been in use among them above one hundred years. They can thus stand in water hour after hour without inconvenience.

Bricks with White Efflorescence.

Tar them, and when the tar is dry, paint them stone colour.

Worms—To drive out of pots, etc.

Securely cork up all the drainage holes in the pot, and then flood it for several hours with clear lime-water.

Green Fly.

Syringe the plants with tobacco-water.

One part ammoniacal liquor from the gas-works, mixed with five or more parts of water, according to its strength, will also destroy the insects.

Green Fly—To remove from House, Pit, or Frame.

Choose a still evening, and let your plants be quite dry. Place them close together, and in a close place thus obtained, put either an iron pan or hard-burnt garden pot; put in it a few red-hot cinders that do not smoke, upon which put your tobacco or tobacco-paper; a cloud of smoke will soon arise. When the frame is well filled with smoke, remove the pan, but be exceedingly careful that the tobacco does not break out into a flame.

Green Fly—Various methods of destroying.

The smart dash of a powerful engine proves water to be a very efficient agent when used with force, and among garden-roses and fruit-trees the engine will continue to be the best aphis devastator, because it promotes the health of the plants besides removing their enemies. The great objection to tobacco is the expense attending it where it needs to be extensively used; it is prompt and effectual; and whether used in solution or as a fumigating agent, needs only moderate caution to insure success. But it is a troublesome remedy; a slight mistake with it may result in serious disasters, and it is of no avail whatever against many other of the plagues by which plants are beset during the season of active vegetation.

We have tried a mixture of aloes and soda with the best results. Two pounds of soda were dissolved with one ounce of aloes, and, when cold, added to a gallon of water. Into this we dipped soft-wooded greenhouse plants that had been shut in on purpose to be well covered with fly for the purpose. The young insects soon let go their hold upon the shoots, and as the plants were laid on their sides, on some clean tiles, they were soon covered with their dead bodies; but some of the plumper aphides remained, apparently unhurt, for an hour or two, and then gave way, and added their corpses to the heap. Some primulas and cinerarias on which the solution was allowed to dry became discoloured, shrivelled, and the forward bloom-buds went blind; but those that were syringed with tepid water next morning were unhurt, and that healthy greenness and vigour which invariably accompanies the use of alkalies in solution when *not overdone*. Thrips and red spider also yielded to the attacks of this solution; but it is one which must be used with care, and, unlike the solution of aloes alone, *must* be washed off in the course of a few hours. Another method of using aloes is to combine with it soft soap, in the proportion of four ounces of each to every gallon of water. This mixture proves to be an effectual "settler" for vermin on wall-trees, and hard-wooded plants of robust habit, but it injures soft-wooded plants and tender newly-grown shoots of all plants, especially vines, but, with proper caution, may be adopted as one of the well-tried and proven remedies, especially against ravages of aphis. It will be found best in all cases to use Barbadoes aloes, which can be had in quantities at from 1*s*. 4*d*. to 1*s*. 8*d*. per lb. Cape aloes may be obtained at 8*d*.; they are very inferior to the other, and no cheaper in the end.—*Floral World and Garden Guide.*

To prevent Green Fly on Apple and Pear Trees.

One pound of sulphur vivum, one pound Scotch snuff, one pound quicklime, half pound lampblack, one pound soft soap, and of water sufficient to make it into the consistence of paint. Unnail your trees about February, before the bloom-buds begin to swell, and, with a common paint-brush, paint every branch from the ground upwards.

The application must be made *every other*, if not *every year;* but once in two years may be sufficient, if thoroughly well done.

A simple mode of Fumigating.

Dissolve a table-spoonful of saltpetre in a pint of water; take pieces of the coarsest brown paper, six inches wide and ten inches long, steep them thoroughly in the solution, dry them, and keep till wanted. To fumigate, roll one of the pieces into a pipe like a cigar, leaving the hollow half an inch in diameter, which fill with tobacco. Twist one end and stick it into the soil, light the other, and it will burn out gradually for an hour or more.

Tobacco-water.

To every gallon of the tobacco-liquor sold by the tobacconists, add five gallons of water; or if tobacconists' liquor is not to be had, use the strongest shag tobacco, pouring boiling water on it, in the proportion of half a gallon to every ounce of tobacco. Tobacco-water should be used only during the hottest sunshine, and should be distributed by means of a fine rose of an engine, so as to wet every leaf. This is the best mode of cleansing peaches, apricots, the cherry, and other orchard-house trees from black fly and grub of all kinds.

Fumigating with Tobacco Smoke.

There are various modes of employing the smoke of tobacco for the destruction of insect pests in plant-houses, but the best is as follows:—According to the size of the place to be fumigated, provide one or more pieces of cast-iron, one inch thick and three inches over. Make these red-hot, and place each in a twenty-four sized pot, and on them place as much tobacco as may be considered necessary to completely fill the house with smoke. An ordinary eight-light house will require three heaters, and one pound of tobacco, divided into three equal parts. If the tobacco is previously soaked in a strong solution of saltpetre, its ignition is more rapid and complete, and a less quantity suffices. The best fumigator is that known as Gidney's; it delivers the smoke rapidly in dense volumes, and requiring no blowing, is not attended with any inconvenience to the operator, merely igniting, and then quitting the house being sufficient.

Mealy Bug and Thrips—To destroy.

Collect a quantity of young laurel shoots, bruise them between a mallet and stone, and put a bushel of them into a four-light pit; shut close for several hours, and give a little air. Or smoke with tobacco several nights running, when the plants are dry; and next morning syringe over and under the leaves with soot-water, holding a pound of size in solution in four gallons of water. For strong hard-wooded plants have a size solution with a pound to the gallon, and daub the bug with a brush wherever he shows himself.

Bulbs—To pack.

Let them be quite ripe, pack them in perfectly dry river (not sea) sand, in a box; case this with another, filling the space between the two, which should be two or three inches wide, with perfectly dry sawdust.

Club, or Ambury.

In old soils, all the cabbage kind, and broccoli, and cauliflowers especially, have a tendency to form club-roots, owing to the attacks of the larvæ of the weevil, and against this pest there is no positive specific. In planting, it is advisable to make a thick puddle of lime and soot, and dip the root and stem of each young plant in it, to render them distasteful to the maggot. Charcoal dust, spread half an inch thick on the plot, and then just mixed with it by the point of the spade, will sometimes act as a preventive, and is always of some benefit. A dressing of lime from the gas-works, at the rate of twelve bushels to the acre, has also been found effectual.

Grub in Onions.

Make some strong lime-water, and add to it as much soot as will make it into a thin paint, and with this water the crop the moment maggot appears. This soot mixture is so stimulating a manure, that it should always be used to increase the weight of the crop. House-slops mixed with lime and soot, would be still more powerful, both to destroy maggot and improve the plant; but unless rain followed immediately, it would be advisable to drench the ground with pure water the day after application.

Ground intended for a crop of large onions should be prepared in the autumn, and after being dug over, should be watered with a mixture of sulphuric acid and water, made so strong as to burn the tongue. This will destroy every animal in the soil, and the winter rains will wash it away entirely before spring.

Bleeding in Vines.

The usual practice of gardeners is to apply a hot iron to the bleeding surface until it is charred, and then rub into the charred surface a paste made of newly-burnt lime and grease. Mr. Knight's plaister is, however, a more effectual application, and is thus made:—

One-fourth of calcined oyster-shells beaten to fine powder in a mortar, and three-fourths of cheese, worked together, until they form a sort of paste. This mixture is to be forced into the pores of the wood, where bleeding takes place, by means of the thumb and finger. A second application is sometimes necessary.

Damping or Fogging off.

Cuttings in heat, and seedlings pricked out, are very liable to damp off, if in a confined air, with too much moisture. The best mode of treatment is, as soon as evidences of damping appear, to give more air, and increase the temperature five degrees, and, at the same time, to sprinkle the surface of the soil with a mixture of silver-sand and powdered peat, crumbled to the fineness of snuff.

Black Boards—To make.

Boil one pound of logwood in water enough to cover it, and add half an ounce of green vitriol. This is superior to paint, as it stains the wood, and will not wear off; it dries in a few minutes, and bears no gloss.

Gooseberry Caterpillars—To destroy.

Take an old four-quart earthen jar, fill it with water, and throw into it one ounce of white hellebore, which may be purchased at any druggist's. This quantity will destroy the caterpillars on one hundred and fifty ordinary-sized bushes. The way to use it, is, on a dry day, shake up the jar well, then take out the quantity intended to be used into a basin, and with an old whitewash brush, sprinkle the parts that are attacked. Keep the jar always closely corked from the air. Green-fly on roses and greenhouse plants may be removed in the same way.

Another way is to get a quantity of elder leaves, and boil them in as much water as will cover them, until the liquor becomes quite black, then clear and cool it, and to every gallon of this liquor add one gallon of tobacco-water. When the trees are quite dry, drench them through the rose of a watering-pot, and in ten minutes the caterpillars will fall off.

Liquid Manures.

For vines, peaches, standard apple, and other fruit trees, and for strong growing edibles, such as cucumbers, celery, cabbage, etc., use one part, by weight, of cow-dung, with four parts of tepid-water, or the collected drainage of the cow-house or pig-stye, diluted with a similar quantity of water. Stove-plants, such as pines, forced vines, peaches, and mulberries, besides most flowering bulbs and shrubs, relish a liquid manure made of soot, in the proportion of six quarts of soot to a hogshead of water. Mr. Knight employed a mixture of one part of the dung of domestic. The principal materials now used for liquid manures are to be used in the following proportions for all ordinary purposes:—Guano—dissolve fifty pounds weight in ten gallons of water, and of this strong solution, add five ounces to ten gallons of water for use; sheep's-dung, one peck to thirty gallons; sulphate of ammonia, a quarter of an ounce to every gallon.

Mistletoe—To grow on Apple Trees.

In the month of March, make two cuts, in the shape of the letter V, on the under side of a branch of an apple-tree; the incisions must be made quite down to the wood of the tree. Raise the tongue of the bark, but not so as to break it, and put underneath one or two seeds, freshly squeezed from ripe mistletoe-berries. The seedlings soon appear, and remain attached to the branch, and their growth seems to be attended with no injury to the tree. In addition to the apple, the mistletoe is found to thrive on the pear, whitethorn, and poplar, but it does not readily grow on the oak.

Moles—To extirpate.

Take some green leaves of the common elder, and strew them in the subterranean paths of the mole. The smell of these leaves is very offensive to the mole, and will soon cause them to disappear.

Imperishable Putty—To make.

Take ten pounds of whitening and one pound of white-lead, and mix it with the necessary quantity of boiled linseed-oil, adding to it a wineglassful of the best sweet oil; this last prevents the white-lead from hardening, and preserves the putty a long time. All putty should be made some time before it is used; and sashes intended to be puttied, should previously receive one coat of paint, which will cause the putty to adhere much firmer.

Old Putty—To soften.

Old putty may be softened by applying wet rags, dipped in a saturated solution of caustic potash, leaving them on for twelve hours, or by rubbing a hot iron along the putty.

Wash to prevent Cattle barking Trees.

Take two-thirds of cow-dung, and one-third lime, and mix, with a little water, to the consistency of thick lime-wash, and lay this on the stems of the trees as far as the cattle can reach.

To kill Docks, Dandelions, etc.

The most simple and effectual way to kill these is to cut the tops off in the spring or summer time, and pour some gas-tar, or sprinkle some salt, on the wound. Either of these will kill the root, by eating to the very extremity.

To prevent Snails and Worms crawling up Trees, etc.

Form a paste with train oil and soot, and lay it on in a circle round the tree, a few inches above the ground, and it will form a barrier over which snails or worms will not pass.

Wash to prevent Hares and Rabbits Barking Trees.

Take one-fourth tar, one-fourth lime, and two fourths cow-dung, and mix together and apply it to the stems of the trees by means of a brush. Where appearance is not an object, lime-wash alone may be applied, and would prove equally efficient; or lime mixed with gas-liquor may be used, with the same results, and it would not look so conspicuous.

To clear Duckweed off Ponds.

A few ducks turned on to a pond where this unsightly weed abounds will, in most instances, devour it; or a straw or hay-band may be twisted long enough to reach from one side to the other. Then two men should take hold, one at each end, and drag it gently from one end to the other. The band will swim on the top, and take all the duckweed before it.

To Prevent Mildew on Trees.

The best preventive against mildew is to keep the plant subject to it occasionally syringed with a decoction of elder leaves, which will prevent the fungus growing on them.

To remove Mildew from Roses, Pelargoniums, etc.

Mildew has been successfully removed from roses and pelargoniums, by dissolving, at the rate of one ounce of nitre to one gallon of water, and water the plants with it occasionally: another way is to wash the diseased parts with a decoction of elder leaves. But the most effectual remedy is flower of sulphur dusted over the foliage, by means of the Boite à Houppe, sold by Burgess and Key, London.

To Fumigate Trees on open Walls.

Peach trees, or nectarines, which are so often attacked with green-fly, may be fumigated on the open walls, by procuring two poles, long enough to reach from the top of the wall to the bottom, standing them one at each side of the tree, allowing them to rest against the top of the wall, and standing them two feet away at the bottom; then get a carpet or blanket and lay over them, securing it well to the wall on each side, so that it will not allow the smoke to escape. The smoke may be blown underneath the bottom by means of a fumigating-pipe, or a No. 24 pot may be half filled with red-hot coals, and put to stand under the carpet, and some tobacco shaked lightly on the top of them. The day after the tree has been fumigated, it should be well washed with the engine or syringe, and the ground digged underneath.

To protect Peaches, etc., from Wasps.

Draw a little cotton wool very thin, and fasten it round the fruit; this will protect them from wasps, and will not affect the flavour or colour of the fruit, providing it be not put on too long before the fruit begins to ripen.

To cure Gumming in Fruit Trees.

The place were the gum accumulates should be well washed and cleaned, and then stopped well up with a paste made of horse-dung, clay, and tar. This will prevent the accumulation of the gum, and will assist the wound in healing over.

To prevent the bottoms of Plant-sticks rotting.

Dip the bottoms of the plant-sticks (as far as they are inserted into the mould) into hot asphalte three or four times, until the asphalte is the sixteenth of an inch thickness on them; this will preserve them a long time. Those that have not the convenience of dipping them in asphalte, may dip them in tar until it adheres to them of the above thickness, and they will endure nearly as long as those that have been asphalted.

Adhesive Mixture for sticking Specimens on Paper.

Take two parts of gum arabic and one of brown sugar, and dissolve them in water to the consistency of cream. This mixture will be found far preferable to gum arabic alone.

To destroy Weeds and Worms in Gravel-walks.

Lay a coat of salt all over the walk, and then water it, using a rose water-pot; but this should not be done where there is a box edging, or it will kill that likewise. Where the edging is turf, slate, or tiles, you will have nothing to fear.

To destroy Worms in Lawns, Grass-plots, etc.

Mix at the rate of ten pounds of slacked lime to thirty gallons of water; stir it up well together, and then let it stand for two or three days, in which time pour it off the sediment, and water your lawn with it, by means of a rose water-pot; this will fetch the worms out on the top of the ground, and they will require to be swept up with a broom and carried away. The best time to perform this operation is in damp weather, as the worms are then nearer the surface; and the lawn should be rolled the evening previous, which will not only assist in bringing the worms nearer the surface, but will fill up all the holes they have forsaken. The following night they will again open the holes in which they lie, and thereby afford the water greater facility to reach them the next day without wasting much by its soaking into forsaken holes. Diluted ammoniacal liquor will answer the same purpose, but it will make the grass look brown for some time afterwards.

To prevent Club in Broccoli, etc.

Mix one gallon of fresh soot and one pound of saltpetre with water to the consistency of good thick paint, and dip the roots of every plant in the mixture before planting them. If the ground is hot and gravelly, a good dressing of marl will do good, and the soil ought to be deepened in every way possible.

Red Spider—A preventive for, in Melon-pits, etc.

Previous to planting out melons or cucumbers into a pit, the walls should be washed inside with a mixture of one gallon of tobacco-water, two pounds of flowers of sulphur, and as much quick-lime as will make it as thick as whitewash. If pits are washed with this mixture, the sun will cause it to form an atmosphere inside the pit in which no insect can live, and it is not injurious to vegetation.

Red Spider—To destroy in Greenhouse, Hot-house, or Cucumber-frame.

The vapour of sulphur is fatal to these insects where the air is thoroughly impregnated with it; and the work of destroying them is completed by syringing the infested plants with water, continuing rather frequently the operation.

Red Spider—To prevent attacks of.

There is no insect so easily prevented as the red spider where the syringe can be often used; and there is no insect that will sooner get possession where a dry atmosphere is kept; so, to provent its attacks, a damp atmosphere should be kept up as much as possible by either syringing or steaming the house. In case neither of these can be resorted to with safety, the flues or pipes may be washed over with sulphur, and should be kept warm to raise an effluvia in the house, which will soon eradicate these pests. But in cases where the infested plants can be well syringed, a few times repeating this operation will cause them to disappear. If a little soft soap is mixed with the water to syringe with, it will prove very obnoxious to many other insects as well as red spider, and will not injure the foliage of the plant, providing the plants are not syringed when the scorching hot sun is upon them.

Red Spider, Thrips, etc.—To destroy in pits.

This may be effected by introducing into the pit some bruised laurel leaves. The bruised leaves should be spread all over the surface inside the pit. If melons or cucumbers are growing therein, great care must be taken not to let them touch the stems of the plants. The best time to do this is in the afternoon, and after the bruised leaves are put in the pit; the heat should be kept up to ninety-five or a hundred degrees, for two hours and a half, when air may be given, and the heat allowed to fall to its usual degree of temperature. The following morning the leaves should be all removed, and the plants well washed with a syringe and clean water. The fumes from laurel leaves will destroy green-fly, thrips, or red spider.

Red Spider on Vines—To destroy.

It is often found very difficult to eradicate red spider from vines when the fruit is on them, as the syringe cannot then be used without injuring the bloom on the fruit. Under such circumstances, the only way to eradicate them is to wash the flues or pipes over with sulphur, and heat them so as to raise a fume of sulphur in the house, at the same time keeping the house closed as much as possible. This must be persevered in for several days to be effectual.

Another way.

Warm the flues enough to raise a gentle steam in the house, then put two or three flower-pots in front of the house, as far from the foliage as possible, and half fill them with red-hot coals, and then sprinkle some sulphur over each of them, and water should at the same time be applied to the flue to raise a steam to prevent the foliage getting scorched. This will effectually destroy the red spider without injuring the fruit. Half a pound of sulphur will be ample to fumigate a large house.

To make Fire-proof Mortar.

Take two-thirds of the best lime and one-third of smith's black dust, and mix with the necessary quantity of water. This will form a mortar that will set nearly as hard as iron, and is the best to use for setting the fire-bricks in or about fire-places.

Thrips on Cucumbers, etc.—To kill.

To kill thrips on cucumbers and melon plants, they should be syringed with tobacco-water, and a little sulphur added, or with a decoction of elder leaves; either of these repeated a few times will suffice; or the infested parts may be dusted over with flowers of sulphur, and allowed to remain on for three or four days, when it should be washed off with a syringe. In stoves and greenhouses, a dusting of the plants with sulphur or Scotch snuff, by means of a dredging-box, or by that best of implements, the Boite à Houppe, will be found effectual.

British-grown Tobacco—To prepare for fumigating with.

When the plants have obtained their full size, pull them up, and tie them two or three plants together, and hang them up, roots uppermost, in a greenhouse or vinery; if the house can be kept to eighty or ninety degrees at the time, so much the better. If there is not room to hang each bundle separately, they should be turned every day, to get all parts dried alike. When they have been well dried, syringe them well with clean water, or immerse them altogether in a cistern of water, and then hang them up again to dry; repeat this operation three or four times, allowing them to become quite dry between times, after which, when the leaves are quite dry, though not so as to break by the operation, they should be stripped from the stems and laid in a box, packing them in as tight as hops are in a sack, and then lay them by in a dry room till wanted for use; at which time they will require to be previously chopped as small as possible with a knife or shears to facilitate their burning. The fumes from them will not affect the leaves of the plants, if they have been prepared as above, and will be equally effectual in destroying green-fly as the manufactured tobacco.

Apples or Pears—To preserve.

After they have been allowed to lay on the shelves in the fruit-room and sweat, they should be wiped dry, and packed in boxes with dry saw-dust, enough to exclude the air from them. The saw-dust from resinous woods should not be used. If they were packed in dry sand, they would keep equally well, and, perhaps, better; but the objection is, that it is very difficult to clean them from sand, and therefore they always eat gritty when so kept.

Another way.

The best of all methods is as follows:—Gather the fruit during a dry day, and put it at once into earthen glazed pans, deep enough to contain two or three layers of fruit, and each pan having a tightly-fitting lid. If the fruit sweats, the exudation dries on the fruit's surface, and helps to keep in the moisture and flavour. The cover helps to do the same, and to exclude the light. Keep the pans in a dry, cool place, and never wipe the fruit until required for dessert.

Pears may be kept in the same way, but require sedulous watching.

To preserve a Branch or Flower in the exact position it grew.

Procure an earthen jar large enough to hold it without its touching the sides, put it to stand upright in it, and carefully dribble in some perfectly dry sand until the whole is covered. Great care should be taken not to put out of place any of the petals or leaves, by putting too much sand in at a time. When the whole is filled the jar must be put to stand in a gentle oven for a few hours, when it may be taken out and kept in any dry place till wanted. It will keep any length of time if not taken out till wanted.

Solution to Preserve Wood.

Mix at the rate of 5 lbs. of chloride of zinc to 25 gallons of water. This is the most effectual solution to steep wood in, to prevent the dry rot, even preferable to wood that has been Kyanised.

Walnuts—To preserve with their Shells clean.

Allow them to stop on the trees till their outer husk begins to crack; then gather and pick the husks off them, and lay them to dry; after which pack them in dry, clean sawdust, enough to exclude the air from them. They should be packed in a dry room: the sawdust from resinous woods should not be used.

Filberts—To preserve with their Husks on.

Let them remain on the trees till the husks turn yellow, then gather them (when dry), and spread them out on a table or floor in a warm, dry place, but they should not be exposed to much light, air, or draught. Examine them every two or three days, to see that neither damp nor mould attacks them; if it does, they must be removed to a still drier place until the husks have become brown, and all the moisture has evaporated; then put them in jars, and keep them in a close dry room till wanted. They will keep in this way for twelve months, and look as fresh as when they were first gathered, if care is taken in drying them.

Cucumbers—To keep for a length of time quite fresh.

When the cucumbers are at their best they should be cut, and laid in a box made for the purpose, just to fit them, and then bury the box in some dry sand, covering it over to the depth of a foot. There should not be any hay or moss put with them in the box, as it will cause them to turn yellow. If laid in the box without hay or moss, their colour and bloom may be preserved for a fortnight to look as fresh as the day they were cut. Melons may also be kept in the same way.

Wounds on Roses, etc.—Composition for.

Take five-eighths of black pitch, one-eighth rosin, one-eighth tallow, and one-eighth bees'-wax; these should be mixed in a small pipkin, and dissolved over a slow fire. Apply it to the wounds with a brush, and it will heal them, as well as prevent their dying back.

To Poison Rats.

Mix 2 lbs. of carbonate of barytes with 1 lb. of lard, and lay it in their way. It is tasteless, odourless, and impalpable, produces great thirst, and death immediately after drinking. Another way is to mix arsenic and lard together, and spread it on bread, and push a piece into every rat-hole; or some small pieces of sponge may be fried in dripping or honey, and strewed about for them to eat. The sponge will distend their intestines, and will cause their death; or half a pint of plaster of Paris, mixed with one pint of oatmeal, will prove equally fatal to them.

Scale on Pine Plants—To kill.

The most easy way to effect this is to place the infected plants in brick pits heated by dung, and knock a few holes through into the flue to allow the ammoniacal vapour from the hot dung to enter the pit. It will not injure the plants, and will soon clear them from scale. In places where there are no pits of the above description, a hot-bed should be made up large enough to stand a two or three-light box on; and when the heat can be kept to near a hundred degrees, the plants should be stood in it, and the box covered over with mats; the plants should remain in it for twelve hours, when they should be taken out and well syringed with a solution of soft soap and tobacco-water. If the plants could be inverted when put in the box, the vapour would have a better opportunity of getting to the stem and bottoms of the leaves, in which latter place the scale generally abounds.

Bug on Pineapples—To destroy.

Boil a pound of tobacco in a gallon or two of water, for an hour or so, and when settled, pour off the liquor. Melt a pound of soft soap and a pound of size or glue in warm water. Take a pound of flowers of sulphur, mix it up into a paste, so that it will easily mix with water afterwards. Add to it one gill of turpentine. Mix the whole well in a tub containing about twelve gallons of water, and at a temperature of 125 to 130 degrees. Stir it all well about, and continue stirring, and then take the pine plants, and syringe them through the liquid, root and top, seeing that every plant and every axil is thoroughly *washed and wetted.* Let them then drain into the tub, and set them aside, tops downwards, to drip and dry. In a day or two syringe them again in clear water at 120 degrees, and drain again, and when dry pot and plunge in a sweet bottom-heat, after having thoroughly renewed the beds, whitewashed, and painted, and thoroughly cleaned the house.

Durable Paint for outdoor work.

Any quantity of charcoal powdered, a sufficient quantity of litharge as a drier, to be well levigated with linseed oil, and when used to be thinned with well boiled linseed oil. The above forms a good black paint, and by adding yellow ochre an excellent green is produced, which is preferable to the bright green used by painters, for all garden work, and does not fade with the sun. This composition was first used by Dr. Parry, of Bath, on some spouts, which, on being examined 14 years afterwards, were found to be as perfect as when first put up. —*Gardener's Chronicle.*

Fireproof Paint.

Take a quantity of the best quicklime, and slake with water in a covered vessel; when the slaking is complete, water or skim milk, or a mixture of both, should be added to the lime, and mixed up to the consistency of cream; then there must be added, at the rate of 20 lbs. of alum, 15 lbs. of potash, and 1 bushel of salt to every 100 gallons of creamy liquor. If the paint is required to be white, 6 lbs. of plaster of Paris, or the same quantity of fine white clay, is to be added to the above proportions of the other ingredients. All these ingredients being mingled, the mixture must then be strained through a fine sieve, and then ground in a colour mill. When roofs are to be covered, or when crumbling brick walls are to be coated, fine white sand is mixed with the paint, in the proportion of 1 lb. of sand to 10 gallons of paint; this addition being made with a view of giving the ingredients a binding or petrifying quality. This paint should always be applied in a hot state, and in very cold weather precautions are necessary to keep it from freezing. Three coats of this paint are deemed, in most cases, sufficient. Any colour may be obtained by adding the usual pigments to the composition.

Tomtits—To kill.

Procure some mutton suet, and grate it with a coarse grater; to every ounce of grated suet add one scruple of nux vomica. Mix them well together, and make it up into balls about the size of a walnut, and place them in the forks of the trees in the garden, especially those the tomtits frequent, and they will readily partake of it.

Small Birds—To poison.

Mix some arsenic with boiled potatoes, and strew the mixture on the tops of walls, outbuildings, etc., or in any place where the poultry will not get to eat it. Nux vomica may be mixed with potatoes, which will have the same effect; or arsenic may be mixed with wheat with the assistance of a little skim milk, to make it adhere, and strewed on the tops of walls and other convenient places for the birds to partake of it. If it is strewed about in frost or snowy weather, the birds will most readily devour it.

Scale on Stove Plants.

Take such plants out of the house one by one, and place them on a clean floor, such as a few boards laid down for the purpose, either in the open air or in a shed. Then tie a piece of canvas cloth cut round, and large enough for the largest pot, which canvas must be slit up to the centre, in order to clasp the stem of the plant, whilst the edge of the canvas is tied tightly over the rim of the pot, first tucking in a quantity of moss over the earth of the pot, keeping the whole a little convex, to prevent the hot-water getting to the roots. This being done lay the plant down on its side, and syringe it well with pure hot water at 140 to 148 degrees of heat. Turn the plant over and over again so as to scald all the insects. It may be necessary to look over some plants again with a small brush so as to clean the crevices, and after the lapse of a few days or a week it may be requisite to give some plants a second dose with the syringe. This and a clean house will keep away all scale.

Cockroaches—To poison.

Mix some arsenic with honey, and lay it on scraps of paper about the floor for them to eat. If arsenic is mixed with boiled potato, and laid about in the same way, it will answer the same purpose: if they are troublesome in pits or houses, a hedgehog may be kept in such places, and he will probably devour all those that come within his reach.

Trap for Cockroaches.

Mix some honey and water together: two teaspoonfuls of honey will be ample for half a common basinful of water; stand the basin on the floor at night, half filled with the mixture, and place three or four small sticks, about half an inch wide, to rest on the edges of the basin for the cockroaches to walk upon. They will fall into the liquid and get drowned, and next morning the havoc will be seen. Some tumbler-glasses, half filled with the mixture, and sunk to the rim in pits, in the tan or soil, make excellent traps for them.

To protect Carnations, etc., from Rabbits.

Beds of carnations, picotees, pinks, and many other sorts of plants may be protected from rabbits, by simply sticking a few sticks that have been dipped in brimstone round the outside of the plants or beds. Congreve matches will, in many instances, answer the purpose; the smell is very offensive to rabbits, and they will not come near them.

Labels for Plants.

Cut some pieces of zinc to the size and shape required, and with a quill-pen write the names of the plants in nitro-muriate of platinum, which will become perfectly black and remain legible for many years. Or, cut the pieces of zinc as above, stamp the holes and paint them white; when dry, write the names with a black-lead pencil in a good round hand, then varnish. This is a more elegant way and is not affected by weather.

Roses—To destroy Maggot in.

A bushel of unslaked lime in powder, half a pound of sulphur also in powder; mix these well whilst dry, then add water and boil for one hour, then add as much soot moistened to the same consistence, just enough to darken the colour; lay this on with a brush all over, stock and head, in the latter part of February.

Moss on Fruit Trees.

Every second year fruit trees should be well scrubbed with a scrubbing brush, dipped in strong brine; so as to moisten every part of the bark of the stem and branches. This not only destroys the moss but insects of all kinds, and is beneficial to all trees, whereas applications of lime choke up the respiratory pores, and sometimes produce canker.

Moss on Gravel Walks

May be kept down by the use of a broom made of wire; if the wire is made of iron the broom should be well dried and dipped in oil before and after being used.

To Grow Names on Wall Fruit.

Cut some small pieces of paper in the shape of letters, or anything else you please, and paste them on peaches and nectarines with gum, just before they begin to turn colour. They should always be pasted on the side that is most exposed to the sun; it will not retard the swelling or deteriorate the flavour of the fruit; and when it is ripe, it should be taken off, and it will leave the exact print on the fruit.

To kill Scale on Orchids, etc.

Take ½ lb. of camphor, and dissolve it in 1 pint of spirits of wine; the result will be a powder, to which add 1 lb. of Scotch snuff, 1 lb. of ground black pepper, and 1 lb. of flowers of sulphur. This must be well mixed together, and put in a bottle and kept carefully stopped; and sprinkle it on the infested plants occasionally. It may be used with success for killing white scale on pine plants, and many others, in addition to orchideæ.

A cheap Tobacco-water.

British-grown tobacco may be used in making tobacco-water, and will be equally as good as that made from manufactured tobacco, for many purposes, if the tobacco is previously prepared as described in page 31, under the head "*To prepare British-grown Tobacco for fumigating with*:" but the stem as well as leaves should be used for making tobacco-water. It should be boiled altogether in a copper for an hour, keeping it covered over as much as possible to prevent the steam escaping. The liquor then should be strained through a canvas bag or hair sieve, and should be put in a cask and bunged up till wanted.

To protect Lettuce and Strawberry-beds from Snails.

If the beds are surrounded by a slate or boardedging, made to stand 5 inches above the ground, and occasionally coated with a paste made of train oil and soot, it will form a barrier over which snails will not pass.

Cucumber and Melon Seed—To prove.

When the fruit is first cut, the seed should be put into a bowl of water, and that which swims on the surface is worthless; the good will sink to the bottom. This can only be depended upon at the time the fruit is first cut; if the seed has been dried and kept for any length of time, it will probably all swim, though it has not lost its vegetating properties.

Cucumber and Melon Seed—To clean.

Take all the seeds that sink in water and put them into a hair sieve, and then pour some warm water over them that has been heated to 90 or 95 degrees, and then rub the seeds about in the sieve. The warm water will divest them of the glutinous matter, and it may be easily rubbed off them through the sieve, after which they may be laid to dry. Cucumber and melon seeds will vegetate after they have been kept for years.

Poison to kill Timber Trees.

Timber trees, as well as animals, may be poisoned, by making a few incisions in the bark, down to the wood, and introducing some arsenic into the wound, and then binding it over and making it as air-tight as possible. The number of incisions must be regulated by the size and health of the tree; but very large timber trees may be killed in this way.

Peas—To protect from slugs and snails.

Lay a train of slaked lime or wood-ashes on each side of the row of peas, and the snails will not pass over it.

To dry Plants for a Herbarium.

The specimens should be gathered when quite dry, and spread out between two sheets of thick blotting paper; great care should be taken in spreading out the leaves and petals on the paper so as to show as plainly as possible the structure of the plant; this done, the paper should then be placed in a warm room under slight pressure, just enough to keep the specimen in the position it was laid between the paper, but not enough to crush the leaves or bruise the petals of the flower; because, if this should be done, it will change the colour of the parts so bruised. The paper should be changed every 24 hours, that the moisture exuded by the specimen may be absorbed in the drier sheets; continue this till the specimens are completely dry in all parts. Heaths are sometimes difficult to dry to preserve their foliage; in such cases the specimens, when first cut, should be dipped in scalding water and then laid to dry, after which they may be laid between two pieces of blotting-paper and dried in the usual way, and they will seldom lose their foliage in the operation, if treated in this way; it will also take the gumminess off the flowers, and greatly facilitate their drying.

A more speedy method.

Prepare several tablets of plaster of Paris, of the size of the book in which you intend to mount your collection; they should not be less than an inch in thickness. The plaster should not be mixed very strong. The lighter they are, the more absorbent. Any plasterer would prepare them to order. When they are thoroughly dry, lay the blotting-paper on the plaster, then the plant, covering it with more paper, as you direct, and then plaster slab, and so on, forming a pile. The plaster absorbs the moisture from the paper so rapidly as to hasten the process, and thereby preserves the colour. Before the tablets are used again, the moisture must be dried out before a fire, taking care not to expose them to a greater heat than the hand can endure. They will then last for many years.—*Floral World and Garden Guide.*

Fungi—To dry for a Herbarium.

Some of the dry, firm kinds may be wrapped up carefully in clean blotting-paper, and laid near the fire or in any warm, dry place, and, with care, will preserve their form tolerably well. But the best method is to have ready, when collecting, a number of tin boxes, partially filled with dry silver sand. The specimens are to be dropped into the sand, with their gills upwards, and they are to be quite covered with sand, sprinkled finely into every crevice, so that, in drying, the sand will prevent them from shrinking. When the boxes are filled, a gentle tap will shake the sand still closer, and tend to secure the specimens against any alteration of their shape in drying. These boxes are to be placed, without lids, in a rather cool oven, or on a shelf near the fire, so as to dry them rather quickly; but if the heat is too great, the fungi will be apt to lose colour. In the course of a week they will be found to be quite dry, when the sand may be shaken out from the interstices, and the specimens mounted in the cabinet, and they will preserve their shape and much of their original colour for years.—*From an Essay on the Formation of a Herbarium, in Hibberd's "Brambles and Bay Leaves."*

To kill Moths for preserving.

As these are often wanted to be sent to be named, or required to preserve, it is requisite they should be killed without injuring their beauty. This may be effected by putting them underneath a glass, and introducing a lighted lucifer under them, or the glass may be previously washed out with spirits of turpentine, and inverted over them, and it will have the desired effect. But a still cleaner way is to place them in tin boxes with tight lids and then plunge the boxes in boiling water for a few minutes.

Hot-water Pipes—To joint.

Procure some rope yarn (some that has not been tarred is the best), ram it well into the joints with the aid of a hammer and blunt chisel; then take some white and red lead in equal quantities, and mix with linseed oil, and form it into putty; then lay it round the pipes to cover the rope yarn, and smooth it off with a knife the same as puttying a light. Joints made in this way have been known to last for years without getting out of repair.

Leakage in Hot-water Pipes—To stop.

Get some iron borings or filings, and mix them with vinegar, forming it into a salve; with this fill up the cracks where the leaking is; and if the pipe has been previously dried, and is kept dry until this has become quite hard, it will never fail to effectually stop the leakage, and will stand for a length of time. If an iron pipe should burst, or there should be a hole broke into it by accident, a piece of iron may be securely fastened over it by bedding it on, in a salve made with iron borings and vinegar; but the pipe should not be used until it has become perfectly firm.

Small Birds—To scare from Seeds.

There are many ways of effecting this, by nets, etc.; but a simple mode of doing it is to stick a few potatoes all over with white feathers, and suspend them a few inches from the ground, by means of a few threads of red worsted passed across your seed beds.

Mice—To poison.

Arsenic, oatmeal, and dripping may be mixed together, and formed into a paste; a portion of this may be pushed into their holes, or laid about in convenient places for them to eat it; or two-thirds of oatmeal may be mixed with one-third of plaster of Paris, and laid in their way, or spread powdered carbonate of Baryta on bread and butter, and place it in their runs.

Instructions on Hybridizing.

Hybridizing plants is merely to bring in contact the pollen of one flower with the stigma of another; but to do this with the greatest certainty, and chance of success, the flower of the plant intended to be impregnated should have its stamens removed before the anthers burst (or bag which contains the pollen), then a plant should be selected, such an one as is desirable to have a cross between; and when the atmosphere is perfectly dry the pollen should be gathered from it and brought in contact with the stigma of the flowers that have had their anthers removed; and the seed saved from the flowers so impregnated will, in all probability, produce plants partaking of the habits, colour of flowers, etc., of both their parents; therefore, one plant of good habit and another with handsome flowers, so impregnated, will in due time unite these two good qualities in one plant. If the plants that you would wish to have a cross between should not happen to be in flower at the same time, the pollen may be collected and kept wrapped up in a sheet of writing paper until you want it, as it will keep good for a length of time; but as the pollen consists of very minute globules, it would be advisable that it be not crushed. Thus a facility is afforded the operator of gathering pollen from his neighbours' plants and applying it to his own; but it should always be borne in mind that the parents should be healthy plants, as diseases in the vegetable kingdom are, in many cases, inheritable.

Bee Sting—To cure.

Immediately after taking out the sting, get an onion and bruise it, and apply it to the stung place, and it will afford immediate relief. Or a washerwoman's blue bag, applied in the same manner, will have a like effect. Spirits of hartshorn or ammonia will give instant relief.

Garden Mousetrap.

The best garden mousetrap is what is generally called the figure-of-four trap; it is made with three sticks and a tile. The sticks should be half an inch in breadth and a tenth of an inch in thickness; the first piece should be four inches in length; this should form the perpendicular line of a figure of four; the second should be eight inches in length, with a sharp point at one end to stick the bait on, and a notch cut on the flat side at the other end, and one in the edge about the middle: this piece will form the horizontal line of the figure; and a third should be four inches long, with a notch on the flat side, about three-quarters of an inch from one end; this should fit on the top of the perpendicular, and the other end should fit in the notch at the end of the horizontal piece, and thus form a figure of four; a roofing tile should then be placed to rest on the end of the top piece. When the mouse disturbs it, by endeavouring to take away the bait, the tile will fall on the top of him. This is the best mousetrap for the garden; but another I will describe nearly as good; stick two small sticks in the ground five inches apart; bore a hole through a broad bean, and double a piece of thread and put through it, and tie it to these sticks about three inches above the ground, with the bean in between the two; then place a brick to rest on this thread with the middle of the brick on the bean; the mouse will bite the thread through to get to the bean, and the brick will fall on the top of him.

Ink for Zinc Labels.

Take 1 drachm of verdigris, 1 drachm of sal ammoniac powder, and half a drachm of lamp-black, and mix them with 10 drachms of water; and this will form an indelible ink for writing on zinc.

Mealy-bug on Vines—To destroy.

Take 2 pounds of soft soap, 2 pounds of flowers of sulphur, 1 pound of roll tobacco, half a gill of oil of turpentine, and two ounces of nux vomica (the latter in powder). The soft soap and sulphur should be mixed together in warm water, in a large vessel, and stirred till dissolved; the roll tobacco must be cut, untwisted, and boiled by itself for an hour and a half, in a saucepan, keeping on the lid; then strain it, and add the liquor to the sulphur and soft soap; then add the nux vomica, and lastly, the oil of turpentine. The liquid when mixed together should be about five gallons. It should be applied to the vines with a painter's brush after the loose bark has been removed, minding to brush it well into the crevices of the bark, spurs, etc.; after which some clay should be mixed with a quantity of the liquid and formed into a paste; with this all the cracks and wounds about the vines should be stopped to exclude the air, without which the insect cannot live. The vines should be dressed with this mixture as soon as the leaves are off them; and again, just before they begin to break. The house should be syringed with a weak solution of soft soap as long as it is practicable, which will always check and annoy the insect very much. And if the house is painted inside and out, and the flue limewashed, and the house well fumigated with sulphur, it will do a great deal towards extirpating this pest; but it is the most formidable enemy a gardener has to contend with, and, therefore, will require much patience and perseverance to effectually get rid of it. It may easily be cleared off pines by the same method as is recommended to rid them of scale; viz., by the vapour of hot dung.

Dahlia Roots—To preserve through the Winter.

The roots should be dug up as soon as the first frost has spoiled their foliage, and cut their stems off about six inches above the tubers; then take and lay them in a greenhouse or pit to dry; after they have become dry, pack them in dry sand in a cellar, there to remain till they begin to grow in spring, when they may be taken and planted in the borders, previously dividing the roots if an increase is required.

Marble—To clean.

Take two parts of common soda, one part of pumice-stone, and one part of finely-powdered chalk; sift it through a fine sieve, and mix it with water; then rub it well all over the marble, and the stains will be removed; then wash the marble over with soap and water, and it will be as clean as it was at first.

Turnip Fly—To prevent.

This pest of the turnip crop is in reality a beetle, its scientific name being *Haltica nemorum.* Various methods have been proposed for the saving of the young crop from its ravages, but they mostly resolve themselves into growing the plant rapidly at first, for the insect feeds only on the seed leaves. Whatever, therefore, promotes a rapid germination of the seeds and the production of the first rough leaves, is to be considered as remedial. Plenty of seed should be sown, and damp weather should be chosen if possible. Burning the surface of the soil and deep digging are beneficial, as tending to destroy the crysalides. The *Cottage Gardener* says the most effectual banishment of the turnip fly is secured by sowing the surface of the soil with gas lime, two or three mornings after the seed has been sown.

Another method.

The seeds intended for sowing should be divided into two equal parts; one part steep in water the night previous to being sown; next morning mix both together, and to every pound of seed add two ounces of flowers of sulphur; this mode will ensure two successive growths, and it is seldom the fly will attack more than one.

Mice—To keep from Peas.

Sow soot with the peas, and to keep the sparrows from nibbling the young tops as soon as the peas come through the ground, dress the rows with soot when the plants are damp. As soot is one of the richest of manures, the crop will be benefited by it use.

Chopped furze is frequently used to keep mice from newly-sown peas, but it is apt to rot in the ground and cause the loss of the seed. Many gardeners use, instead of either furze or soot, powdered rosin, which is a most effectual protector, not only of peas, but of bulbs. Soaking peas in a solution of bitter aloes is another good preventive.

The most effectual method to protect peas from the depredations of mice, birds, and slugs, is by simply strewing sawdust, half an inch thick, entirely over the drill after the peas are sown and raked, that is, upon the soil. Mice never touch it; birds do not like it, and, indeed, never meddle with the peas when they appear through it; and it bothers the slugs by adhering to them. Any description of sawdust will do but that of yellow deal.

Rockwork—To construct.

In constructing elevated mounds for ferns and alpines, the base should be of building rubbish faced with burrs from the brick-kilns, or with large blocks of stone or flint, if such are plentiful in the district; the soil in the lower parts should be a mixture of sandy loam, leaf-mould, and peat for ferns and flowering plants, and in the wet hollows for marsh ferns, rotten wood should be used plentifully. The higher portions should be built up with additional tiers of brick rubbish, and with a soil composed of sandy loam, old mortar, and leaf-mould in the interstices, as in these higher portions most alpines do well. The summit may be a bed of rich loam, resting on a bottom of rubbish for ornamental plants of large growth; but a mere mound, the summit of which is below the eye, should be faced all over with large rough blocks of stone or vitrified blocks, with suitable soil between for the plants. To imitate stratified rocks regular courses of brickwork are the best, to be built up in cliffs and caves as may be desired, and then the whole faced with Roman cement, an eighth of an inch thick, and the stratifications marked as the work proceeds. When weather-stained and suitably planted, rockwork of such a kind, if on a somewhat large scale, has a natural and imposing effect; but for small mounds and banks, vitrified bricks or flints, roughly arranged in a few bold curves, are by far the best. A north aspect is the best for most ferns and alpines.

Artificial Coral for Rockwork—To make.

Take four parts of yellow rosin and one part of vermilion, and melt them together; dip twigs, cinders, or stones in this mixture, and it will give them the appearance of coral, and are applicable to rockwork, grotto, or any fancy work as a substitute for that costly article.

Trap for Snails.

Snails are particularly fond of bran; if a little is spread on the ground, and covered over with a few cabbage leaves or tiles, they will congregate under them in great numbers, and by examining them every morning, and destroying them, their numbers will be materially decreased.

To make Hydrangea Flowers Blue.

If they are grown in a tolerably strong maiden loam, which contains a portion of oxide of iron, the flower will come blue without further trouble; but they will require to be potted into this said compost, and continually grown in the same, from the cutting pot, to ensure their flowers coming blue. If the soil itself will not produce the flower blue, they should be watered with a solution of alum for some time previous to flowering. The solution may be made by mixing at the rate of one ounce of alum to a gallon of rain water. The plants should be struck from small cuttings of the soft wood, from February till May, that are required to flower in those months the following year. They should be potted into thirty-two sized pots, time enough for their roots to fill them before winter. It is advisable to flower them the following spring in the thirty-twos, allowing the plants to produce only one cluster of flowers each, and taking off all the suckers and side shoots to strike for flowering the following spring, as old plants cannot be depended upon to produce blue flowers.

Withered Flowers—To revive.

Plunge the stems into boiling water, and by the time the water is cold the flowers will revive. The ends of the stalks should then be cut off, and the flowers should be put to stand in cold water, and they will keep fresh for several days.

Grafting Wax.

Take common sealing-wax, any colour but green, one part, mutton fat one part, white soap one part, honey one-eighth part. Melt the wax and the fat first, then add the sealing-wax, gradually stirring the while; and lastly put in the honey, just before taking the whole off the fire. It should be poured hot into paper moulds, and kept slightly stirred till it begins to harden.

Another Grafting Wax.

Take 4 ounces of pitch, 4 ounces of resin, 2 ounces of hogs'-lard, and two ounces of bees'-wax; put them altogether into a pipkin, and dissolve them over a slow fire, and it will form an excellent grafting wax. By spreading some of this mixture on paper it makes the grafting paper. The French make very good grafting wax, by mixing together equal quantities of bees'-wax and resin, and adding as much tallow as will cause it to dissolve at a low temperature.

Grafting Clay.

Take strong adhesive loam or clay, and knead it till of the consistency of soft soap. Take also some horse droppings, and rub them through a riddle of half-inch mesh. Mix the two ingredients with fresh cow-dung, all in equal parts, and knead till of a uniform consistency. When grafting, the operator should have at hand a vessel full of finely-riddled ashes, and after the clay is bound round the scion, the hands should be dipped in the ashes—this will enable the operator to give the whole a neat finish.

Tulips and other Flowers—To expand.

Tulips, and many other flowers, when cut early on a dull, cold morning, are seldom very well expanded. If they are afterwards placed in a warm room, and their stems put to stand in warm water, it will cause them to expand their flowers as well as they would have done on the bed on the brightest day in spring. This is not only applicable to tulips, but to many other flowers as well.

Ants—To expel.

Ants may be expelled by shaking flowers of sulphur over the nest, or place, where they resort. This will not kill them, but will drive them from the spot. Ants have also a very great dislike to passing over chalk, and may be effectually prevented from passing up the stems of trees, by making a circle round the stem with chalk, an *inch and a half* or two inches broad.

Moss on Lawns—To kill.

Water the lawn with a weak solution of ammoniacal liquor, one gallon of this liquor is sufficient to mix with four gallons of water; this should be put on with a rose waterpot. It will cause the grass to look brown afterwards for a while, but it will soon redeem its verdure. Another way, is to procure some very fine siftings of coal-ashes, and sow them all over the parts where moss abounds. It will only be requisite that they are sown very thinly, and if done just before a shower of rain, so much the better, as the rain will wash it in; this will kill the moss without injuring the grass. The presence of moss indicates that the soil is exhausted, and a top-dressing of nitrate of soda or soot will be found beneficial. If the grass is made to thrive, it will always choke the moss.

Moss on Meadow Land—To kill.

The mossy parts of the meadow should be well manured with good well-rotted stable dung in the autumn; and, if practicable, the grass should be fed off the following spring with sheep. Nitrate of soda sown on the mossy parts of the field will also kill the moss, and is an excellent manure for the grass, but this should not be sown at the rate of more than one and a half hundredweight per acre.

Wasps' Nests—To destroy.

Procure a glass bottle of the usual size, and rinse it out with spirits of turpentine, and thrust the neck of the bottle into the hole, and stop it well round with mud, completely preventing the ingress and egress of the wasps. The fumes of the turpentine will soon destroy the wasps, so that the nests may be digged out a fortnight afterwards, and they will be found dead. Another way is to mix gunpowder and flowers of sulphur together, and form a cylindrical tube with a piece of match paper, and fill it with these ingredients, and then set fire to the end of the paper, and thrust it into the hole, and put a turf over it to confine the fumes; this will stupify them for awhile, in which time the nests should be digged out and destroyed.

Blacklead on Zinc Labels—To render indelible.

The part of the label intended to be written on should be rubbed over with pumice-stone, then write on it with a blacklead pencil, and when the writing has been exposed to the air for a few days, it will become indelible, and if the label should by any means get covered with mould, it may be washed off it, and the writing will reappear. Labels for this purpose are preferable when made of old zinc. A varnish may be applied over the writing, as a still better preservative.

Seeds for Exportation—To prepare.

Seeds intended for exportation should not be gathered until they have become perfectly well ripe, then they should be laid in a stove, or exposed in the sun to dry, as getting them perfectly well dry is the principal point. They may then be packed in bags, papers, or boxes. So that they are kept dry, they will bear a voyage of many months, without injury to their vegetating properties.

Nails for Wall Trees

Should be of cast-iron. Before using them, make them red-hot, and then throw them into cold linseed oil. This gives them a varnish which preserves them from rusting, and prevents the mortar of the wall sticking to them when they are drawn.

Otto of Roses—To make.

Gather the flowers of the hundred-leaved rose (*rosa centifolia*), put them in a large jar or cask, with just sufficient water to cover them, then put the vessel to stand in the sun, and in about a week afterwards the otto (*a butyraceous*) oil will form a scum on the surface, which should be removed by the aid of a piece of cotton.

A Rule to ascertain the Angle formed by the Roofs of Greenhouses, etc.

On a piece of paper draw a horizontal line, and from the end of this another at right angles by a square or otherwise; let the former be as many eighths of inches long as the house is feet in width, between where the under side of the rafter touches the front wall and the back, and the other line as many eighths of inches in length as the back wall is feet in height, measuring from a point level with the top of the front wall plate to the underside of the rafter at the top; then draw a line from point to point, which will form the slanting side of the roof; then with a pair of compasses take the distance of sixty of the line of chords on a "Gunter's scale;" then place one foot of the compasses on the angular point, and with the other describe an arc, intersecting the lines representing the base and the roof; the distance between these lines at the point of intersection of this arc will extend from the beginning of the line of chords on the Gunter's scale to the number of degrees which the angle contains, or, in other words, to the degree of elevation. A slight knowledge of geometry will be requisite for a person to understand the above directions, without which it is almost impossible for any person to ascertain correctly the angle of elevation formed by roofs, etc.

Puddling for Roots, Trees, Shrubs, etc.

The best for this purpose is formed of three pounds of garden soil, one ounce of salt, two ounces of soot, and one gallon of water.

Rule to calculate the amount of Pipe required to heat a Plant-house of given dimensions.

Multiply the cubic feet of air to be heated per minute by the difference between the temperature the house is to be kept at, and that of the external air in degrees of Fahrenheit's thermometer, and divide the product by 2·1; the difference between 200, which is the temperature of the steam-pipes and the temperature of the house; the quotient will be the surface of cast-iron pipe required.—*Tredgold.*

Ajutage of Fountains.

M. François, in his work, "Art des Fountains," estimates the decrease in the height of the jet to be one foot below the level of the source for every hundred yards distance. He considers the ajutage or opening of the pipe should be one-fourth of the size of the pipe itself. Where pipes are already laid down, and the power of the head not very accurately known, it is well, by means of a leaden nozzle, the orifice of which may be readily increased or diminished, to test the amount of force, so that the ajutage may be adapted to throw the highest and fullest jet the head is capable of.—*Hibberd's Rustic Adornments.*

Marsh Plants—To Propagate.

The best plan is by means of a stone trough six inches to a foot deep, and of any convenient length and breadth, and with a hole for a tap at one corner. This is to be treated as a flower-pot: the bottom being covered with small stones, and the trough filled up with a compost of peat and light loam. The top is then mulched with any description of light moss that can be got. The top being closed, the mould is then watered till it is saturated to the brim. Planting is best performed in March or April.—*Hibberd's Rustic Adornments.*

Fish Ponds and Aquaria.

Where there is no stone basin, the bottom of a pond should be puddled with clay, and then covered with coarse gravel. The clay should be from six to twelve inches thick, well worked with water into a tenacious paste, and then beaten or trodden with the naked feet into a close mass. Instead of a regular slope, it is best to form the sides in the manner of terraces, so that the flower-pots containing aquatic plants may be dropped into their places on a series of descending shelves, and removed again for the winter, if the plants require protection. Where plants, such as lilies, are to remain permanently, strong loam should be laid on the clay for them, and the whole covered with gravel before letting the water in. The best material for fountain basins and statuary, is Ransome's patent imperishable stone.

Universal Compost.

The preparation of many separate kinds of composts may be obviated by the general use of the following mixture: Fibry peat one part, leaf mould two parts, thoroughly rotted dung one part, light hazelly loam four parts, and one part sharp sand. There is scarcely any flowering plant but will grow well in such a mixture, and if peat is not to be had, an additional part of leaf mould may take its place.

Compost for Melons.

Where rich loam is scarce, the scrapings of ponds and ditches will be found a good substitute, in the culture of melons and gourds generally, which do not succeed in poor soils, especially if of a sandy nature.

Artificial Peat for Ferns and Bog Plants.

Where good fibry peat cannot be had, a substistitute may be found as follows: Get a quantity of sphagnum, or any kind of green moss, and chop it fine. To this add about an equal quantity of leaf mould, rotten wood, and silver-sand. This will form the basis of a compost in which most heath plants will flourish; and loam, old dung, and half-rotted turf may be added, according to the nature of the plants to be grown in it.

Pot Pourri—A perfume for Fancy Jars.

Mix half a pound of common salt with a quarter of a pound of saltpetre, a quarter of an ounce of storax, half a dozen cloves, a handful of dried bay leaves, and another handful of dried lavender flowers. This basis of the Pot

Pourri will last for years, and you may add to it annually petals of roses and of other fragrant flowers gathered on dry days, as fancy may dictate. By the same rule you may add, if approved of, powdered benzoin, chips of sandal wood, cinnamon, orris root, and musk. A very excellent Pot Pourri may be made in winter with a pound of dried rose petals bought at a chemist's, mixed with four ounces of salt and two of saltpetre, on which put eight drops of essence of ambergris, six drops of essence of lemon, four drops of oil of cloves, four drops of oil of lavender, and two drops of essence of bergamot.—*Cottage Gardener.*

Flowers in a Garden—To arrange.

The Cavendish Society recommend blue flowers to be placed next to orange, and violet next to the yellow; whilst red and pink flowers are never to be seen to greater advantage than when surrounded by verdure and by white flowers: the latter may also be advantageously dispersed among groups of blue and orange, and violet and yellow flowers. Plants whose flowers are to produce a contrast should be of the same size; and in many cases the colour of the sand or gravel-walks, or beds of a garden, should be made to conduce to the general effect.

Rape-dust, as a Manure.

The seeds of the rape plant, after the oil has been extracted from it, is a fertilizer of great value. According to the analysis of M. Boussingault, eight tons of rape-dust afford as much nitrogen as one hundred tons of farm-yard manure. It has been proved by Sir Humphrey Davy, and other eminent men, that rape-dust possesses the power of absorbing from twice to ten times as much atmospheric moisture as the finest soils.

Herbs—To dry.

The best state in which mint, balm, thyme, sage, and other kitchen or medicinal herbs can be gathered for drying, to preserve for winter use, is just as their flowers are opening. At that period of growth they are found to contain more of the essential oil, on which their flavours depend, than at any other.

Eggs—To preserve.

Mr. Fawcett, chemist, of Gateshead, by experiment has proved that eggs may be preserved for several months (it may be for years) perfectly good and sweet. In September, 1855, he covered with two coats of mucilage of gum arabic (made with equal parts of gum and water), several fresh eggs; and in March, 1856, six months afterwards, the eggs were boiled, and found to be as sweet and as good as when newly laid. One coat of the gum should be quite dry before the other is applied.

Parsley—To dry for Winter Use.

Pull or cut your parsley when full grown, and hang it in the sun to dry, taking care not to allow it to get wet. It may afterwards be tied in bunches, and hung up in a dry room till wanted. When it is used, a little should be rubbed in the palm of the hand, and put in the pot; it will immediately resume its colour, flavour, and smell, though it has been kept for years.

Ice—To preserve.

The chief requisites to preserve ice is to pound it very small and then beat it firmly together, and exclude the air from it by means of a good covering of straw. In places where there is an ice-well for the purpose, the ice should be well pounded with wooden mallets, and then deposited in the ice-well, well ramming it down, keeping a tier of straw between the ice and the wall, as the latter precaution will keep the ice from wasting. The ice-well should be well drained, but the drain should be so constructed as not to admit of air to the bottom of the well, or the bulk of ice will be greatly diminished by it. Ice-wells are the best places to keep ice for any length of time, but, where this convenience is not at hand, a large heap of finely-powdered ice may be made on the top of a dry bank, and covered over with straw or fern to the thickness of two or three feet. If it is previously well pounded and beaten firmly together into a heap, it will keep a supply for the following summer.

Gold Fish—Treatment of.

In cases where gold-fish are kept in vessels in rooms, etc., they should be kept in river water. The water will require to be changed, according to the size of the vessel or the number of fish kept therein, but it is not well to change the water too often. A vessel that will hold a common-sized pail of water, two fish may be kept in by changing the water once a fortnight, and so on in proportion. If any food is supplied them, it should be a few crumbs of bread or small worms or gentles dropped in the water once or twice a-week. If a bottom of washed gravel is laid down and planted with aquatic plants, the water never need be changed at all.—See *The Book of the Aquarium.*

To turn White Flowers Red.

If the juice of Virginian pokeweed (*Phytolacca decandra*) is sprinkled on the white hyacinth, it will change it red, and on many other white flowers it will have a similar effect.

Trap for Earwigs.

Where earwigs attack peaches and nectarines, some broad-bean stalks should be cut in lengths of five or six inches, and placed horizontally in different parts of the tree. The hollow stems of the sunflower and Jerusalem artichoke are equally applicable. The tree should be examined every day or every other day, and the earwigs blown out into scalding water. The best trap for earwigs in dahlias is to put a little dry moss in the bottom of a small sixty pot, and invert it on the top of the stick that supports the plant. The earwigs will congregate in the moss, which will be required to be occasionally examined, and then shaken out into scalding water. The stems of *Heracleum giganteum,* cut into six-inch lengths, make excellent earwig traps; but the most effectual is Edwards's earwig trap, made by Edwards, of Paul Square, Birmingham.

Cut Flowers—To preserve.

To preserve cut flowers for the greatest length of time, their stems should be put in a glass of water, and the glass put to stand on a plate, and then place over it a bell-glass with the edges previously wetted, that when it comes in contact with the plate it may prevent the air passing between, thus securing them as air-tight as possible; they will keep fresh a long time. If some charcoal has been previously steeped in the water, or a small piece of camphor dissolved, it will greatly assist in keeping the flowers fresh. Violets may be preserved for a long time by sticking them with short stems into a glass dish filled with damp silver-sand, and then inverting a tumbler over them.

Mildew in Cucumbers.

Mildew in cucumber plants generally arises from insufficient bottom heat, or watering them with cold water: to cure this, the diseased parts should be washed with a mixture of soap-suds and sulphur, or a decoction of elder leaves, and an inch and a half of fresh mould should be put over the surface of the bed, and the bottom heat should be raised to about eighty degrees. If this is done the plants will soon grow out of the disease.

Wash for Vines, Peaches, etc.

Take 2 lbs. soft soap, 2 lbs. flowers of sulphur, 1 lb. roll tobacco, and 3 ounces nux vomica in powder; the tobacco should be boiled well for an hour and a half, then strained, and the other ingredients mixed with the liquid, and as much water added to it as will make it five gallons. This should be laid on with a brush, brushing it well into the crevices of the bark.

Charred Rubbish, a valuable top-dressing.

Cut pieces of wood into lengths of two or three feet, and so that they can be packed pretty closely together, and form a heap. This heap may be either placed on the level ground or in a pit; but in the latter case three or four openings should be cut in the sides from the bottom of the pit outwards, in order to admit a little draught for the ignition of the wood in the first instance. In the centre of the space several long pieces of wood must be fixed, so as to leave an opening for introducing the kindling; or an opening may be formed by pieces of twelve or fifteen inches in length, two of which are laid horizontally six inches apart; two others are then laid at the same distance from each other across the two first, and so on, thus forming a rough flue six inches square from the bottom to the top of the heap. Round this billets, faggots, or bundles of wood are closely packed in a nearly upright position. When completed, the heap should be of a round, conical form. The wood may, however, be arranged in the form of a ridge, several openings being left for firing. When the pile is completed it must be covered with turf, which may be further closed by earth or sand, as is found necessary during the process. Where turf cannot be easily procured, old mats, or any other rubbish that will prevent the earth from mixing with the wood, will afford a tolerably good substitute. When all is covered except the opening at top, and some holes for air near the bottom, fire is introduced down the central flue. As soon as the heaps are fairly in a blaze, the top must be well closed, and the smoke, but not flame, encouraged to issue as equally as possible from every other portion of the surface by making holes with a pointed stick where smoke does not appear. Some portion of the wood will necessarily be consumed before sufficient heat can be obtained, but that must be disregarded. As soon as the wood becomes heated to 212°, the water is given off in the form of steam, and the whole mass takes fire readily enough. Great care is then necessary to prevent flame bursting out; as the heat increases the openings in the covering must be reduced, and all must be finally closed when the charring is found to be complete.

A cheap and lasting Paint for Rails, Gates, etc.

Two quarts of skim milk, eight ounces of fresh-slaked lime, six ounces of boiled linseed oil, two ounces of white Burgundy pitch, dissolved in the oil by a gentle heat. The lime must be slaked in cold water, and dried in the air until it falls into a fine powder, then mix it with one-fourth part of the milk, adding the oil and pitch (mixed) by degrees. Stir with a wooden spatula, adding the remainder of the milk; lastly, add three pounds of Spanish white, the whole to be thoroughly mixed. Two coats are necessary, and this quantity is sufficient for twenty-seven yards twice over. Antwerp green, navy green, or Brunswick green might be used in lieu of the Spanish white, omitting, or using in a *much* smaller proportion, the slaked lime.

Woodlice—To kill.

The most effectual way is to pour boiling water on them. This may be easily applied in cucumber and melon pits (those on Mills's plan). The best time to do this is as soon as the covering is taken off in a morning; the woodlice are then generally about the walls, and may be killed by wholesale by pouring boiling water out of a rose waterpot down the walls inside the pit.

Woodlice—Trap for.

Take a boiled potato and wrap it up in some dry hay, and put it in a flowerpot; place this in one corner of your pit, or place where the woodlice are, and they will congregate in it in great numbers. It should be examined every morning, and the woodlice shaken out into boiling water. Another way is to keep some dry hay on the top of a nine-inch square floor tile, and take another tile of the same dimensions and bruise all that are congregated in the hay once or twice a-day; by so doing their numbers will very soon be materially decreased.

Waterproof Cloth.

Prepare saturated solution of water, sugar-of-lead, and alum, and immerse the cloth in the liquid a few hours. On withdrawing it, and allowing it to dry, it will be found to be impervious to rain. The cloth should be afterwards hot-pressed.

Waterproof Garments.

To waterproof any sort of cloth or made garments all that is necessary is to make a very weak solution of glue or size (when cold it is weak and tremulous, about the consistency of calves'-foot jelly), and while hot stir in a piece of alum till the taste of alum is distinctly perceived, when the piece is to be taken out, at the same time to add a little soap also, or rather soap-suds, to it, and then, while it is hot, to brush over the surface of the clothes with this solution. The preferable mode, however, is to waterproof the cloth while in the web. In this state it can be dipped into the solution, and afterwards wrung out, or, what would be better still, passed through a pair of squeezing rollers, and the pile of cloth afterwards laid smooth with the brush and cold water. The use of the soap is to take away the hard feel that the size when applied alone would impart to the cloth, and which would also render it more difficult for the tailor to sew. The process on the large scale is, besides, an exceedingly cheap one. There is little labour required to pass a web of cloth through squeezing-rollers, and not only is the sizing material in itself cheap, but only a very small portion of it is essential to the waterproofing of a surface of cloth, as the greater part of it is expressed by the squeezing rollers, only as much being left in the cloth as to cause it to feel damp. Exposure to the air in the same way as sized paper is dried, completes the process of waterproofing.

Wireworm.

Wireworm may be kept from potato and carrot ground by a liberal use of soot in sowing. To trap wireworm, slices of carrot or potato make the best baits.

Wireworm—To destroy without Traps.

Towards the end of the year, remove the carnations and other plants from the flower beds, and previous to the latter being turned up for exposure to the winter frosts, take sulphuric acid, in the proportion of one gallon to twenty of water, and apply the mixture plentifully to the soil. In two days again repeat the operation, having previously turned up the soil, and seen that it had been well pulverized. After the lapse of ten or fourteen days, give a plentiful application of powdered lime, and shortly after turn it up in ridges as usual. The result will be that it will be a rare thing to *see a* wireworm, where previously plants were eaten up in a wholesale manner. This can be used on a large scale as well as on the small flower beds.

Wireworm—Trap for.

The best trap for wireworm is a carrot or potato thrust a few inches into the soil, to be drawn out two or three times a week and examined, and the worms destroyed. To preserve any particular crop in ground infested with wireworms, bury potatoes in the soil at intervals all round the piece, thrusting a stick into each potato, to serve as a handle and to mark where they are. To decoy them from permanent beds of valuable plants, such as anemones, ranunculuses, carnations, etc., it is said to be a good practice to make an edging of daisies, for the roots of which they show a decided preference. A little spirit of tar, or a large quantity of gas-lime mixed with the soil, will generally cause them to flit.

The loam or compost used for growing carnations in should be exposed to frost the previous winter as much as possible, turning it at every opportunity in frosty weather, to allow the frost to penetrate the whole heap, as it will kill both the wireworm and their larvæ.

Substitute for Glass—Paper and Calico Lights.

The cheap rate at which glass is now produced, renders any substitute for it of much less importance than formerly. Both paper and calico have been employed, and the latter is still occasionally used for cheapness. For paper lights, cartridge paper is the best; the sheets should be damped all over, and then nailed on the frames, with a strip of tape between the heads of the tacks and the paper. When they are dry they should be painted over with boiled linseed oil, into which a little white-lead has been incorporated.

Oiled Calico for Pits and Frames.

Old, pale linseed oil three pints, sugar-of-lead (acetate of lead) one ounce, white resin four ounces. Grind the acetate with a little of the oil, then add the rest, and the resin. Incorporate thoroughly in a large iron pot over a gentle fire, andwith a large brush apply hot to a fine calico stretched loosely previously, by means of tacks, upon the frame. On the following day it is fit for use, and may either be done over a second time, *or tack*ed on tightly to remain.

Varnish for Rustic Seats.

One quart of boiled linseed oil and two ounces of asphaltum, to be boiled on a slow fire till the asphalte is dissolved, being kept stirred to prevent it boiling over. This gives a fine, dark oak colour, is not sticky, and looks well for a year.

Or, first wash the furniture with soap and water, and when dry, on a sunny day, do it over with common boiled linseed oil; leave that to dry a day or two, then varnish it over once or twice with hard varnish. If well done this will last for years, and prevent annoyance from insects.

Tar Varnish for Wood and Iron.

One gallon of coal-tar, half a pint of spirits of turpentine, two ounces of oil of vitriol, stirred, and laid on like paint.

To destroy Black Fly on Cherry Trees.

It is best destroyed by tobacco-water. The most economical way of applying it is by dipping the leaves on which they are into a basin containing the tobacco-water.

Vine Mildew—(Procédé Grison).

One pound of flowers of sulphur, and an equal quantity, by measure, of fresh-slacked lime. When these are well mixed put them into an iron or glazed earthenware pot containing five pints of water; let it boil ten minutes, keeping it stirred all the time; then remove the pot from the fire. and allow it to settle, when about four pints of the clear liquid may be bottled for use. Before using, however, add twelve and a half gallons of water to each pint of the liquid.

Vine Scale—To remove.

If scale appears when leaves are on the vines, paint them over with a strong solution of gum-arabic or starch: allow it to remain for a week and then wash it off. A more effectual way is to brush them over thoroughly twice (allowing an interval of a day between each brushing) with spirits of turpentine.

In autumn, after the leaves have fallen, scrape away and burn all the rough bark, and then with a rough brush paint the stems and branches with the following mixture:—half a pound of soft-soap, one pound of sulphur, half an ounce of black pepper, and four gallons of water boiled for twenty minutes. It ought to be thick enough to adhere to the wood like paint; if it does not, thicken it with lime and soot.

Hot-Bed—To make of Soap Waste.

The following is a plan for making a hot-bed which will retain a steady heat for months together, without any trouble further than that of making it. Although the article of which it is composed is not conveniently procurable by all, still, to those who are fortunate enough to be within its reach, it will be of vast service. At any chemical works, where commercial soda-ash is manufactured, there is a waste, technically called soap-waste, and which will be gladly parted with by the proprietors free of any expense. This waste, when thrown into a heap, heats in a day or two, and retains a good steady temperature for months together, and, in my opinion, would form a superior hot-bed to any yet in use for the raising of tender and half-hardy annuals, and forwarding other plants for the borders for the summer months. A hot-bed of this material will save a great deal of trouble, and will serve the purpose infinitely better than dung, so far as the regularity of the heat is concerned.

Stonework—To clean.

A wash of Portland cement is generally used to clean statuary and other stone ornaments in gardens. If used on Ransome's imperishable stone, this is an injury to the material, and a green growth of confervæ soon appears on it. A better plan is to have the stone scrubbed with rain water, and when dry washed over with strong brine. This renders it white and sparkling, is no injury to the material, and it is a long time before any green stains appear, the brine being destructive to the germs of vegetation that adhere to the pores of the stone.

Mineralized Canvas.

Tiffany having come into extensive use as a substitute for glass in houses devoted to roses and fruit trees, a mode of rendering it more durable is of special value. This and all similar fabrics used for tulip beds, orchard-houses, preservative pits, etc., may be mineralized at a cheap rate, and made very lasting—in fact, almost imperishable. Soak the tiffany or canvas for twelve hours in a solution of blue vitriol, 1 lb. to twenty quarts of water; draw it out of the solution, and wring it very lightly, only just sufficient to remove as much of the liquid as would drain from it if it were not wrung. Let it dry in a place free from dust, and the preparation is complete.

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